Project Management for Online Course Quality Management

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Abstract— **Post-pandemic, a requirement that online courses be certified for accessibility and meet federal guidelines for instructional equivalency created a backlog of courses that needed to be processed quickly and efficiently. This situation was particularly acute in the Radow College of Humanities and Social Sciences, the largest College at Kennesaw State University, and its 11 component schools and departments. Without the availability of increased staff or funding, efficient workflow management systems needed to be established quickly and using software already available at the institution. Team members developed the "Bucket System" based on multiple components of Microsoft 365 to map and track workflows across multiple criteria and multiple reviewers. This paper builds on a previous presentation by exploring existing project management methodologies and expanding on how the team built their framework, software system, and supplementary tools to meet needs specific to higher education institutions.**

Keywords-course review; online course quality; project management methodology (PMM); monitoring and evaluation (M&E) framework; Microsoft 365.

I. INTRODUCTION

This project, first presented at eLmL 2022: The Fourteenth International Conference of Mobile, Hybrid, and On-line Learning [1], originally detailed a year-long, large-scale course quality review endeavor conducted by the Office of Digital Education (ODE) in the Radow College of Humanities and Social Sciences (RCHSS) at Kennesaw State University (KSU), a public university in metro-Atlanta, Georgia. In summer 2022, shortly after the conference we presented our findings at, college and university leadership decided to reassign the course review process to the university-level equivalent of the ODE. While no further data was collected, this paper explores the existing project management methodologies consulted during our initial conversations and expands on how our team built the framework, software system, and supplementary tools we used to support the process we developed.

In 2018, KSU President Pamela Whitten chose to discontinue the requirement of Quality Matters (QM) Certification for all online classes. Colleges within the university could still require quality control, but it was left to college leadership to decide if and how to implement this control. RCHSS continued to offer training and certification options for those departments requesting support. Training and certification were also built into compensation contracts offered by the college. Despite these continued options, the college decided to allow the requirement for instructor and course certification to lapse.

Instead of following QM, which cost money and received opposition from faculty resistant to the latest version update, digital education experts in what was then the Distance Learning Center partnered with faculty to develop a set of standards that fit the university's needs and aligned with best practices. This process ultimately resulted in the KSU Course Quality Checklist (KSU CQC) and was approved through various shared governance bodies. While some colleges chose to remain with QM (after memberships were provided through the University System) and others developed their own rubrics, the KSU CQC was adopted across multiple colleges at the university and has become the standard quality measure in RCHSS in instances when course review is required.

When the pandemic hit in March 2020, the focus across KSU shifted from offering high quality courses to simply *offering* courses. Suddenly, everyone needed to be online. Professional development shifted with the needs of faculty and training facilitators as they struggled alike to adapt to the relatively new modality of synchronous online education. The nearly four-month period of online-only education at the start of the pandemic allowed misconceptions about online teaching and learning to spread as digital learning experts scrambled to teach basics to faculty with little-to-no online experience. Then, in Fall 2020, as the return to campus began, faculty were expected to teach in various rotational and hybrid formats with many having had little-to-no training in these new modalities. This trend continued into Spring 2021, with a complete return to campus planned for Fall 2021. By this point, the combined effects of eliminating required instructor and course certification for online offerings and unsound pedagogical approaches created by pandemic pandemonium were beginning to manifest in student complaints about the quality of online education. Studies [2][3][4] show "(1) stress and negative emotions increased, (2) positive emotions, enjoyment with class, satisfaction with class decreased, (3) engagement decreased, and (4) extroverts and those who prefer on campus classes were impacted the most by the conversion to online [2]."

The authors first present a description of the context and magnitude of the challenge to be addressed. The paper then details the project management system developed to facilitate the workflow of the overall process and the ancillaries intended to help faculty master the skills necessary to have all courses certified by the university's deadlines.

II. Overview and Rationale

After a change in leadership in July 2021, KSU's Office of the President charged the Division of Curriculum and Academic Innovation (CAI) with ensuring that all digital course content met recently updated federal guidelines and the University System of Georgia Board of Regents policy on accessibility standards and sustained instructor interaction. Each college, in turn, was asked to submit a review procedure for all online and hybrid courses. While many colleges already possessed the requested review procedure, the lack of required review since 2018 meant RCHSS was faced with creating and implementing a new review process in a limited window of time.

A. The RCHSS Proposal

The RCHSS ODE solicited input from faculty and college administrators and created three plans for reviewing asynchronous online, synchronous or hybrid online, and *template* courses (defined as courses created in entirety by faculty designers but taught by other course facilitators). These processes were then vetted through the appropriate college faculty governance channels. The CAI charged each college with developing and implementing their plans by the start of Spring 2022, which gave the ODE team roughly five and a half months to solicit feedback, adapt the KSU CQC for hybrid and template courses, update faculty certification trainings, and develop all tools (including communication and project management tools) needed to implement the initial two-year review cycle. No new resources were provided at the university or college level to support this initiative.

B. A Larger College, a Larger Problem

The five-month implementation timeline and two-year review timeline were reasonable for most other colleges at KSU. However, RCHSS is, by far, the largest college on campus, with 425 faculty and 8,500 students enrolled in majors within the College. Additionally, RCHSS is responsible for eight of the fourteen general education standards required for institutional accreditation. As shown in Figure 1, of those eight standards, the college offers 50 different courses that can be completed to fulfill the requirements, compared to 22 courses offered by a mix of the Coles College of Business, the College of Science and Mathematics (CSM), and the College of the Arts (COTA) across the remaining six standards. In Fall 2021, RCHSS offered 35% of undergraduate course sections and 41% of graduate course sections, totaling 750 sections, in the online modality (Figure 1).

Of the eleven departments and schools in RCHSS, two have completely rejected the idea of template courses outside of use for emergency hires, and two regularly use template courses. The remaining seven departments reserve template courses for adjunct and emergency use only. This practice contrasts with other colleges at the university. For the most part, other colleges only utilize template courses or are so limited in size as to require one or two course builds to meet class section needs. Because

RCHSS is focused on disciplines in the humanities and social sciences, RCHSS has dozens of sections of one course, all with unique designs, to allow faculty to teach to their strengths and provide their expertise to students. For example, many faculty teach American literature online, and yet each professor has a different specialization; one professor might be an expert on African American literature in the 19th century and build his/her/their course around those authors, while another might focus on Gothic authors in the American South, which could produce a thematically similar course with content drastically different from his/her/their colleague. When each faculty member creates his/her/their course according to best practices and capitalizes on his/her/their area of expertise, students get the best instruction and experience. This, of course, contrasts to programs taught in other colleges that are built around state/national/international accreditation standards, which often utilize a specific curriculum across all course sections. Additionally, bespoke course designs allow for continued variety in perspective and approach, avoiding some of the pitfalls of intellectual and cultural homogenization.

The ODE team had little time to prepare for this project and had no formal structures or tools in place to accommodate a project this large. The structures and tools previously used to review courses on a training basis needed to be adapted to accommodate a higher volume of course designs reviewed in a shorter amount of time.

It takes an average of three to five hours to review each course, contingent on the course content and approach. Based upon pre-pandemic numbers, the team had anticipated reviewing a total of approximately 750 courses over a two-year period. In spring 2022, we expected 135 courses to be submitted for review. 192 courses have been submitted. Projected forward, we are now anticipating reviewing around 1000 courses over the next two years using a team of two instructional designers, three faculty, and four student assistants.

The most comparable project underta"en b' the team was a review of 115 partial courses across a seven-month period, which was tracked in an Excel spreadsheet. At the time, our team consisted of one instructional designer, two faculty, and two senior student assistants, and all were able to assist in the review process.

III. Project Management Software

A. Possible Paths Forward

Knowing the scope of the project, we began to look at how we would manage *our* end of the course review process:

1. Conducting the initial course review,
2. Sharing the feedback written during each review with the faculty designer so they could make changes,

3. Assisting the faculty designer with any technology issues they ran into during their changes,
4. Re-reviewing the course after appropriate changes had been completed,
5. Submitting the course to the institutional database managed by CAI.
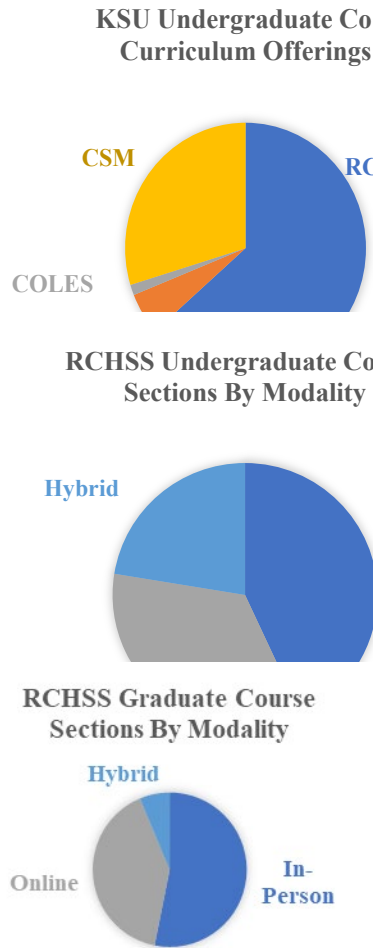

Figure 1. Three charts showing the division of courses across KSU and within the college.

We had three factors to consider when developing our workflow [5]. First, we needed to abide by the processes put forth by the departments in our college. Because our college is so large, the RCHSS Digital Education Council requested that each department be allowed to submit their own process to us. The outcomes from this request were varied: seven departments decided to defer to the ODE and have us carry out all reviews; one department decided to do the same but added additional faculty support by way of a mentoring committee to assist faculty designers with updating their courses to meet the reviews put forth by the ODE team; and three departments decided to conduct all parts of the review, with minimal support from the ODE.

Second, our undergraduate student assistants are only able to conduct the accessibility portion of the review, not to make decisions concerning content and pedagogy. One section of the KSU CQC is dedicated to digital accessibility. The review process for this section is very clinical, so it can be completed by students without years of instructional design experience.

Third, the sheer number of courses was overwhelming to a team with only five people qualified to evaluate entire courses. Department schedulers indicated a slow return to pre-pandemic scheduling practices, so we estimated that we would need to review 135 courses across the Spring 2022 semester. We were wary of more "traditional" project management methodologies (PMM) that required adherence to strict procedures, given the ever-changing nature of our institution and the natural progression of shared governance proceedings that might affect RCHSS's course review policy. At the same time, we knew that the CAI was planning for this process to be a multi-year undertaking, scaffolded by course level (e.g., 1000-level courses were reviewed in Spring 2022, 2000- and 3000-level courses would be reviewed in Fall 2022, 4000- and 5000-level courses would be reviewed in Spring 2023, and so on through upper-level undergraduate and then graduate courses). This would require us to reevaluate at the end of each semester with the little downtime that classes were not in session, 9-month faculty were not on contract, but that the University was still open.
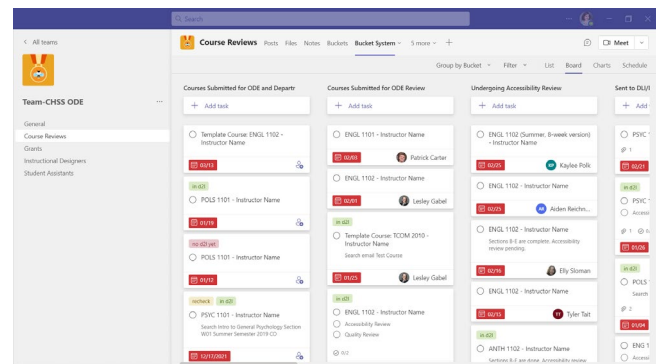

Figure 2. Screenshot of the "Bucket System" dashboard.

As previously stated, our most comparable undertaking was tracked in a spreadsheet and was conducted when our team was half the current size. Initial research about implementing PMM revealed some of our own hesitations: fear about unforeseen changes in policies that our office would have to coordinate; implementing a structured process in a naturally flexible and collaborative office; and an unfamiliarity with how to manage every document and piece of data we needed to track [6]. Further, reviews [7] indicated that they were "more adequate to be implemented in larger and more complex projects… [while] agile methodologies… are more suitable… for some smaller and less complex projects We looked more closely at agile methodology and found better matches for our needs with the SCRUM approach,

which emphasizes teamwork and accountability and meshes flexibility with repetitive process [8]. The only problem was that length of our "sprints" would follow a semesterly pattern—nearly triple the length recommended by experts [8]. Essentially, we would be able to utilize most aspects of a SCRUM framework, but we would need to expand our timeline and build in some added flexibility.
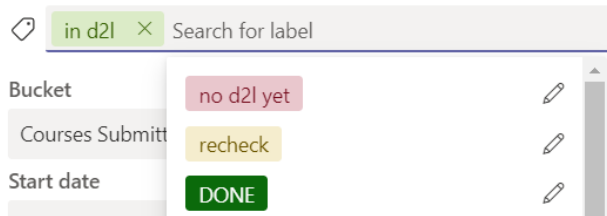

Figure 3. A screenshot of the tagging system the ODE utilizes within the bucket system.

We decided that the reevaluation/sprint process would instead follow a monitoring and evaluation (M&E) framework [9], which is typically implemented to track large-scale resources and goods for government agencies and non-governmental organizations (NGOs). In our case, neither the university nor the college could commit any additional resources, and the ODE had very little resources of our own. Instead of having the typical outputs, outcomes, and impacts of resource development, our outputs would be course reviews, outcomes would focus on bringing courses up to meet the course quality standards set by the federal government and the University, and the impact would be approved courses (ideally leading to improved retention and graduation rates, though these would not be tracked by the ODE).

After reading and watching project management software (PMS) reviews and testimonies from other higher education teams [10][11], the team met and compiled a list of the features we would need.

- Access for at least 10 people
- Reporting functions
- Ability to connect files to a task
- Ability to assign tasks
- Ability to create subtasks
- A visual marker for where the course was in the review workflow.

Our team also decided that we preferred a more visual interface, as opposed to a simple task list. A comprehensive literature shows [12] that "creative discovery processes are almost never structured and require lots of interaction with the data." Because this process was new and we knew that we would need a comprehensive understanding of our workflow to both increase efficiency and advise College and University leadership, we wanted to ensure that we had a holistic view at the ready.

Most importantly, all of this needed to be located in a no-cost or extremely low-cost tool. PMS like Slack [13], Trello [14], and ClickUp [15] had been utilized by the team before but required monthly subscriptions for large projects. Open-source PMS like OpenProject [16] and Focalboard [17] all had the key features the ODE team needed but also had annual hosting costs, usually upwards of $150USD. Products offered by ServiceNow [18], BMC [19], and IBM [20] were much more robust than needed for this one project, so they were not considered.

B. "The Bucket System"

After developing our list of wants and needs, we developed an original system we have christened as the "Bucket System." Our system was devised to be hosted in existing PMS and as an easy way to physically move items along in a workflow, while also providing more flexibility than an Excel spreadsheet. The team devised a plan to build something similar to other tools by utilizing various Microsoft applications, as the University had recently moved to Microsoft 365 [21]. This project management tool would be modeled after existing tools [22] but would be customized to our specific needs.
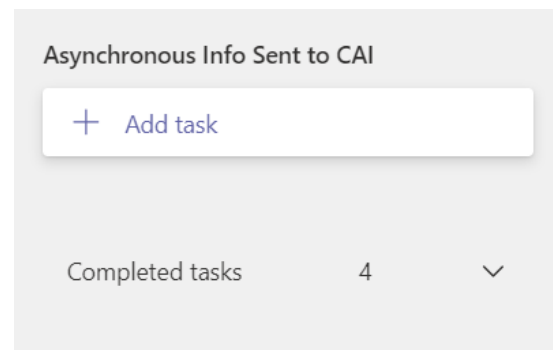

Figure 4. Screenshot showing how tasks become invisible once marked "complete."

Microsoft Planner had the tools we would need at a task-management level (file connection, task assignment, reporting functions, and subtasks) and had several layout options. It was also integrated with Microsoft Teams—which would create a localized "dashboard"—and Power Automate, Microsoft's backend automation and workflow application, which would be crucial in populating the system. Microsoft Lists had similar functions—and the bonus of custom metadata fields—but lacked the visual layout we wanted. Ultimately, the goal was to produce a Kanban-like system of workflow visualizations, as we unfortunately did not have the luxury of limiting work in progress (WIP) that was required in a true Kanban system [23]. Microsoft Planner utilizes columns called "buckets" and projects called "cards" (Figure 2). Each bucket represents a step in the workflow, and each card within a bucket represents an individual course. Additionally, we could follow a loose interpretation of SCRUM methodology with built in data visualization, which

allowed us to catch up on what had been completed, by whom, and what obstacles people were facing.
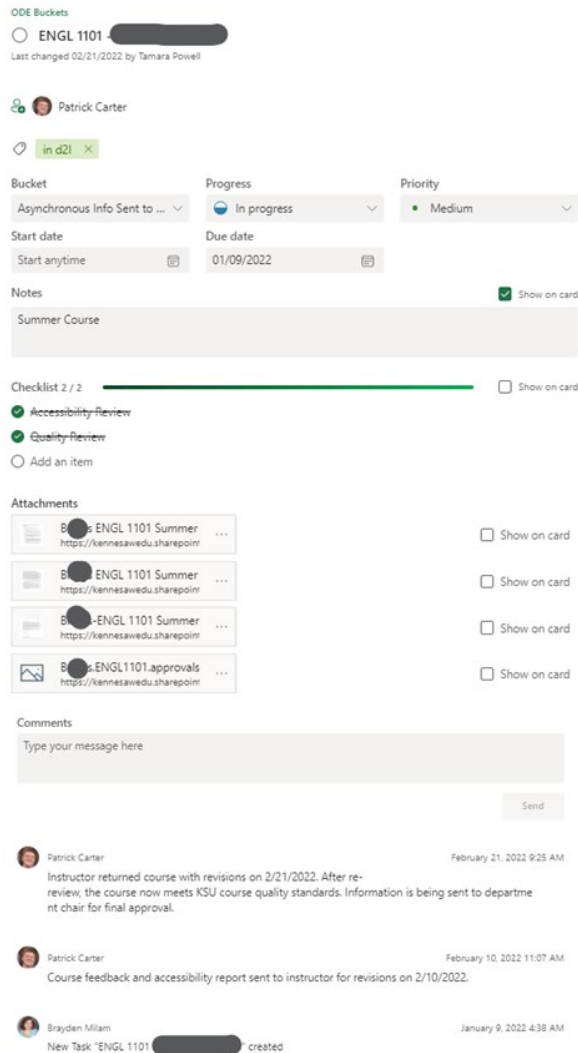

Figure 5. A course review card showing the light green "in D2L tag," a completed checklist, attached documents, and comment trail.

Within the cards, we initially utilized the tag feature to indicate whether ODE directors had access to the course in the LMS (and, thus, had the ability to add reviewers) and whether the course was undergoing a "recheck" or re-review. We ultimately added a tag to mark course reviews as finished because we initially lost courses that had been dismissed as "complete" (Figures 3 and 4).

We also use the comment section to create a documentation trail regarding when communication had been sent to faculty. The team found that using the "start date" feature did little to help prioritize courses, as Planner does not offer a "start date" option under the sorting tool. We instead pivoted to using the "due date" feature, which had the bonus of posting the date on the card. This all creates an easily accessible history of what

courses have been reviewed, where they are in the process, and who has completed what (Figure 5).

After building the process in planner, the decision was made to integrate the structure with Microsoft Forms, which would allow faculty to submit "review requests." We reviewed the Certified Course Build SmartSheet developed by the CAI, which was designed to track courses certified according to quality standards and included key questions on our Form (Figure 6). Originally, we created one Form for all of RCHSS. As we tested the process, we discovered we needed individual Forms for all eleven departments and schools. This decision was made to minimize confusion, as we initially offered too many review-customization options on a single form, and to streamline the automation process. The automation process is as follows: a faculty member fills out a form, Power Automate pulls information from the Form to generate a Planner card in the correct bucket and then sends a personalized confirmation email to the faculty member (Figure 7).

Figure 6. The first page of the Review Request Form for the Department of Psychological Science.

After the faculty member has added the ODE directors to their course shell, the formal review process begins. At the beginning of each week, the ODE Associate Director assigns courses to ODE reviewers (instructional designers and faculty) and student assistants depending on the courses available for review. Instructional designers and faculty prioritize courses taught by departments with their

own review process, while student assistants complete accessibility reviews for courses that are reviewed by the ODE in full. The instructional designers and faculty then complete sections A and B of the review for the courses assigned to them, which require greater familiarity with digital accessibility standards and state and federal mandates, respectively. They then pass the course along to the department liaison/representative so the department can finish the rest of the review. Alternately, students complete section A of the review, which only requires familiarity with standards of digital accessibility, for the courses assigned to them. After the accessibility review has been completed, students pass their reviews on to the ODE instructional designers and faculty, who complete the rest of the review.
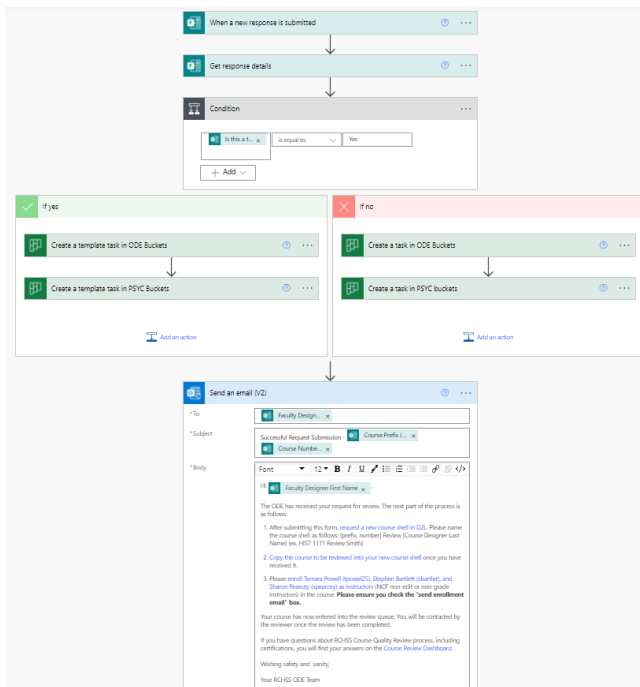

Figure 7. The automated process behind the Psychological Science Request Form, built with Power Automate.

Following the completion of the initial review, the review documents are sent to the faculty designer. The faculty designer then works to make the appropriate changes and consults with ODE team members (or their department liaisons) if they need assistance. After the appropriate changes have been made, the course undergoes a secondary review. If the course passes this review, the review documents will then be sent to the department chair for approval. If the course does not pass the review, the revision process begins again. This revision process may be completed up to two times before the course is removed from the queue. If it is removed from the queue, the chair must request reactivation and the faculty designer must resubmit the course to be reviewed without priority.

Once a course is approved by the department chair, the ODE Director submits the course to the CAI's Certified Course Design SmartSheet and notifies the program coordinator, who updates the public-facing spreadsheet maintained by the ODE. As of Spring 2022, this process is set to repeat on a five-year cycle. The initial review cycle is based on course level, so all existing courses will have completed the review process by December 2023 and been scheduled for their next re-review.

C. Supplemental Tools for the Team

The most refined and evaluated portion of our review process involved managing individual workloads. To contend with the sheer number of courses, we developed clinical language guides for our accessibility reviewers and fillable documents for our content equivalency reviewers.

Figure 8. An Accessibility Check Template, with verbiage available to copy and paste into communications with faculty members.

The language guides were developed first, as the first step of our end of the review process. Our student assistants were trained in reviewing digital materials for accessibility (e.g., ensuring videos had intelligible captions, documents contained heading structures, color contrast was appropriate, etc.). Ms. Milam, the staff expert on accessibility and a former ODE student assistant, worked with Sam Lee to develop a template in January 2021. By the time the reviews were well underway, she and Kaylee Polk worked to adapt the language in the template into a guide (Figure 8), so that students could copy and paste language to help faculty address the issues at hand. Each software supported by KSU (all Microsoft Office products, D2L, Adobe Acrobat, and Kaltura MediaSpace) had a section with professional, courteous language instructing the faculty designer of the issue and providing resources on how to solve it. The language was then pasted into the final review document with information about where the issue was located (the weekly or unit folder—called "modules"—along with the document name).

After developing the language guides, the content equivalency reviewers began developing fillable documents (Figure 9) for their own use. Three of these documents were created: one for asynchronous online courses, one for hybrid and synchronous online courses, and one for on-site/face-to-face courses. Each document utilized MS Word's checkbox, content controls, and grouped text features to create a mix of "locked" content and "fillable" content. This was to ensure that faculty received an accessible, standardized document with direct yet courteous language to assist them through the review process.

Section C: Pedagogy, Structure, Navigation, Course Objectives, and Module Objectives

☐ 21. The course includes measurable course objectives (course goals/learning outcomes) at the appropriate level of Bloom's Taxonomy.

☐ 22. Modules include measurable objectives that align with course objectives.

☐ 23. The course includes digital course content, assignments, and assessments that align with course and module objectives.

☐ 24. The course aligns with the stated description in the current KSU Undergraduate Catalog or Graduate Catalog course, as appropriate, including its learning objectives, module objectives, and competencies.

☐ 25. The course modality – asynchronous online (95%, 100%) – is clearly stated in the course materials. (95% asynchronous is defined as students required to come to campus once during the semester, usually to take a final exam).

☐ 26. Materials are organized in a way that creates an obvious path for learners by organizing content into sections based on weekly, chronological modules, not based on type of content.

☐ 27. The course schedule is included and makes clear expectations for each class session (including dates and, in the case of hybrid courses, modality).

☐ 28. The course has a clear and consistent structure and navigation, which is clearly stated and explained to students via navigational videos or guides within the "Start Here" module and within modules and/or checklists/task lists within modules.

☐ 29. Course content is labeled clearly from a learner's perspective.

Comments for Section C:

30. Click or tap here to enter text.

Figure 9. The KSU Course Quality Checklist converted into a fillable document in MS Word, created with Content Controls.

IV. TOOLS FOR SHAREHOLDER INVOLVEMENT

Our most important shareholders in this process were faculty. To initiate a review, faculty must submit their courses for review, request new course shells for each course review needed, and add the ODE directors to the new course shells. We wanted to streamline the process as much as possible to make it as simple as possible for faculty, so as not to induce confusion or increase their workloads. The simple form and automated email accomplished most of these goals. We kept the forms as simple as possible, included tutorials on how to request, copy, and add the ODE directors to the course shells in Brightspace D2L, our learning management system; eliminated an additional step of communication by requesting faculty utilize the enrollment notification option in D2L; and added a layer of familiarity with personalization tools [24]. Ultimately, we have received positive, anecdotal feedback from faculty about how easy the process is.

A. The Course Review Dashboard

The ODE decided to anticipate the needs of faculty and create resources to aid them in the course review process. The primary resource was the "Course Review Dashboard," which functions as a one-stop-shop for all

After consulting with the RCHSS Digital Education Council, the ODE found that the new emphasis on accessibility requirements made syllabi templates more desired by faculty. Again, lockability remained the greatest difficulty, as faculty would frequently mistakenly render ADA compliant syllabi inaccessible by altering certain document features. After many hours of research, the team was able to use Microsoft Word to develop a "lockable" template, much like the fillable document mentioned earlier, that met accreditation and accessibility standards but remained customizable enough to allow for academic freedom. The team also worked with the First-Year Composition (FYC) program to develop two syllabi specifically for use in ENGL 1101: Composition I and ENGL 1102: Composition II, two courses all students are required to complete prior to graduation. These templates were created with a variety of Developer Tools, including content controls and "lockable" groups, and general accessibility tools, like Styles and list/table structures.

V. CONCLUSION

With varying requirements across the eleven schools and colleges that comprise the Radow College, the unexpectedly high number of course submissions, and the need to validate review practices and feedback information across reviewers, much fine-tuning of the Bucket System is still in progress. The overall system, however, is proving to be robust and flexible while providing consistent tracking and information capture. things related to course reviews, including tutorials, policies and checklist criteria, review request forms, and contacts. This project was designed to be far-reaching and creative. We knew the website needed to be easy to navigate and user friendly, but we also knew how expansive the topics and resources needed to be. We ultimately built eight pages hosted on the site and built an additional site specifically for course reviewers within the departments. We also completely redesigned our tutorial library, which hosted 115 simple technology and software tutorials, for a cleaner interface with a more visual navigation structure (Figure 9).

A. Syllabus Templates

With a great deal of the accessibility and quality checklist requirements focused on course syllabi, a significant need for an accessible syllabus template arose. The need to include an ever-increasing number of policies and links to student success tools had placed syllabi templates at the forefront of academic concerns of the university for well over a decade. The updated federal guidelines and University System of Georgia Board of Regents policy only increased the urgency in addressing this need. The greatest difficulty was in "locking" the template so that required items could not be altered or deleted while keeping the remainder of the document open for editing by the instructor. An early attempt at an electronic solution to the syllabus template issue ended in a costly failed attempt to partner with a professional technical company. Further attempts at a lockable form were abandoned.

Because the Bucket System is built on components of Microsoft 365 and accessed through familiar interfaces, the time required to learn to use the system effectively is far shorter than would be the case using other software tools to manage the same project. Bringing new reviewers or content specialists online is also simplified, with no need to obtain additional software licenses or install additional software. It also bridges seamlessly across units within the College and across the University as needed.
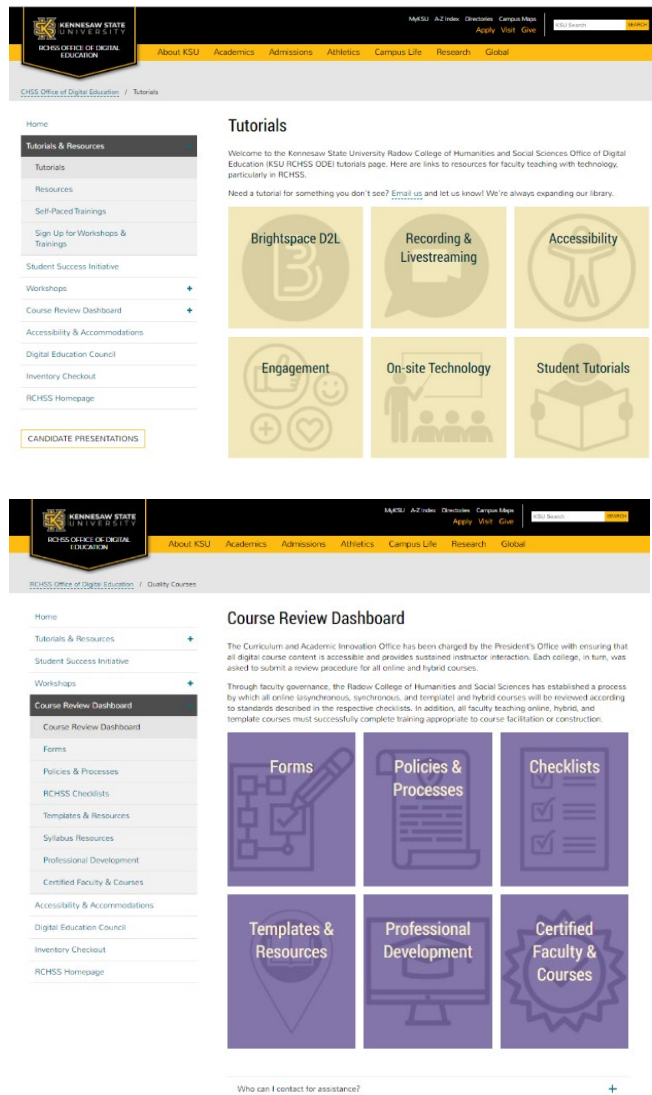

Figure 10. Two screenshots showing the Tutorial and Course Review Dashboard websites.

The Bucket System has been adapted across multiple course review efforts and departmental processes. Each department with their own review process has a system customized to their needs, including one built for the university-level equivalent of ODE. For example, the faculty member designated as the Hybrid Specialist in the ODE is piloting an adaptation of the Bucket System to track and manage a grant-funded Open Educational Resource (OER) project. Currently, this version of the Bucket System functions more as a task board but will be adapted at the conclusion of the OER's pilot semester (Spring 2023) into a ticketing system for instructors to provide feedback and request support from the original grant team on any issues that may present. Using the Bucket System in this way will allow for data collection, as the team plans to build in survey software and track open feedback and support tickets. Additionally, the Bucket System is being used as an event management tool by RCHSS's Office of the Dean. This version of the Bucket System more closely mirrors the original version. Each event hosted by the College has a dashboard, is used for knowledge management, task completion, budget tracking, contact tracking, and collects data that feeds into a more comprehensive data visualization page. The Office of the Dean plans to duplicate the system at the end of the fiscal year to use for future years.

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